

Notice of Allowability

Application No.

10/757,469

Examiner

Timothy J. Henn

Applicant(s)

KOBAYASHI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to response filed 04 May 2007.
2. ☒ The allowed claim(s) is/are 1-10 renumbered in the order presented.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-10 in the reply filed on 03 May 2007 is acknowledged.
2. This application is in condition for allowance except for the presence of claims 11-13 directed to a memory storing defective pixel locations and a testing system for determining whether a pixel is defective or not which were non-elected without traverse. Accordingly, claims 11-13 have been cancelled.

Allowable Subject Matter

3. Claims 1-10 are allowed.
4. The following is an examiner's statement of reasons for allowance: While image sensors with high sensitivity pixel portions and subsidiary low sensitivity pixel portions (e.g. Kondo et al., US 2003/014564; Oda, US 6,831,692; Harada, US 6,211,915) and defective pixel systems which obtain defective pixel correction values from neighboring pixels (e.g. Suzuki, US 5,327,246; Watanabe, US 7,092,018; Mendis et al., US 2005/0030394) are known in the prior art, the prior art does not teach or fairly suggest a system or method for correcting a defective pixel in an image sensor including a main photosensitive pixel and a subsidiary photosensitive pixel, in which if a subsidiary pixel is a defective pixel and a main pixel is a normal pixel, determining whether the main pixel is saturated and if the main pixel is not saturated, correcting the subsidiary pixel according to the value of the main pixel in the pixel cell identical to the defective

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photosensitive pixel. The examiner notes that the prior art defective pixel correction systems/methods use pixel values from neighboring photosensitive pixels of the same color (i.e. sensitivity), and not a value from the same pixel cell of a different sensitivity as claimed. Lee et al. (US 6,660,988) discloses a defective pixel correction system in which a pixel is composed of two photodiodes and the wiring and microlens structure is changed to read an image signal from the best performing photodiode of the two photodiodes (e.g. Figure 4). However, Lee does not correct the other photodiode in the manner claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH
6/19/2007



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